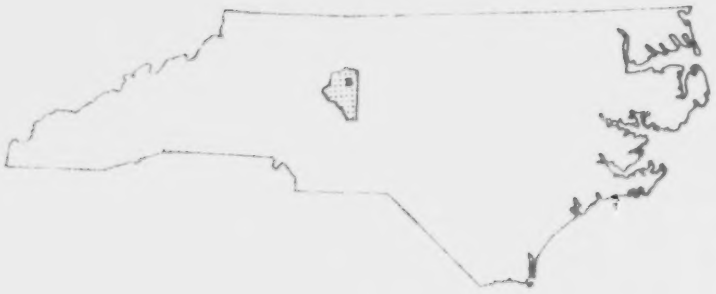
APR 4 1990

FEMA 370082

FLOOD INSURANCE STUDY

CITY OF THOMASVILLE, NORTH CAROLINA

DAVIDSON COUNTY



REVISED:

JUNE 4, 1990

Federal Emergency Management Agency

COMMUNITY NUMBER 370082

NOTICE TO
FLOOD INSURANCE STUDY USERS

Communities participating in the National Flood Insurance Program have established repositories of flood hazard data for floodplain management and flood insurance purposes. This Flood Insurance Study may not contain all data available within the repository. It is advisable to contact the community repository for any additional data.

This publication incorporates revisions to the original Flood Insurance Study. These revisions are presented in Section 9.0.

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FLOOD INSURANCE STUDY
CITY OF THOMASVILLE, NORTH CAROLINA

1.0 INTRODUCTION

1.1 Purpose of Study

The purpose of this Flood Insurance Study is to investigate the existence and severity of flood hazards in the City of Thomasville, Davidson County, North Carolina, and to aid in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. Initial use of the information will be to convert the City of Thomasville to the regular program of flood insurance by the Federal Insurance Administration (FIA). Further use of the information will be made by local and regional planners in their efforts to promote sound land use and flood plain development.

1.2 Coordination

A search for basic data was made at all levels of government. The North Carolina Department of Natural and Economic Resources and local interests were informed of the initiation of the study and requested to furnish available pertinent information. Information was also requested from the U. S. Army Corps of Engineers (COE), U.S. Soil Conservation Service (SCS), the National Oceanic and Atmospheric Administration (NOAA), and the U. S. Geological Survey (USGS). A city map at a scale of 1"=800' was provided by the Thomasville Planning Board and Zoning Commission (Reference 1).

A meeting was held with FIA and local interests on November 23, 1976, to inform the community of the nature and purpose of the Flood Insurance Study, to solicit community input, and to identify streams requiring detailed study. The State Coordinator was unable to attend this meeting but was consulted and kept informed of study progress. Newspaper notices requesting local flood information were nonproductive. At a meeting on July 22, 1977, names of the streams being studied were identified by local officials.

A final coordination meeting was held on October 18, 1978, to review the study. Representatives from Moore, Gardner and Associates, Inc., FIA, and officials from the City of Thomasville, were in attendance for this meeting.

1.3 Authority and Acknowledgements

The source of authority for this Flood Insurance Study is the National Flood Insurance Act of 1968, as amended.

The hydrologic and hydraulic analyses for this study were performed by Moore, Gardner and Associates, inc., for the Federal Insurance Administration under Contract Number H 4046 This work, which was completed in March 1978, covered all significant flooding sources in the City of Thomasville.

2.0 AREA STUDIED

2.1 Scope of Study

This Flood Insurance Study covers the incorporated area and the extraterritorial boundary of the City of Thomasville. The area of study is shown on the Vicinity Map (Figure 1).

Developed areas and areas with a high development potential were studied in detail. These areas include Beck Creek, Black Creek, Brooke Creek, Carlan Creek, Charles Creek, Crest Creek, Crooked Creek, Cucumber Creek, Davidson Creek, Douty Creek, East Creek, Hall Creek, Hamby Creek, Hanks Branch, Hogeye Creek, Huntsford Creek, Hunts Fork, Kyle Creek, Leonard Creek, Liberty Creek, Mitchell Creek, Myers Creek, North Hamby Creek, Pineywood Branch, Regan Creek, School Creek, Short Creek, Small Creek, Sour Creek, Spencer Creek, Spitting Creek, Straight Creek, Trinity Creek, Ward Creek, Warner Creek, and Wash Creek.

2.2 Community Description

The City of Thomasville is located approximately 15 miles south of Greensboro, in north central North Carolina on the Appalachian Piedmont Plateau, an area characterized by undulating terrain. Slopes as high as 15 percent occur in isolated areas.

Soils in Thomasville belong predominately to the Helena-Enon-Wilkes Association. These soils are charaterized by loamy surface areas and moderately slow to slowly permeable clayey subsoils. Thomasville is basically underlain by diorite and granite.

Thomasville has mild winters and warm summers. The average length of the freeze-free period is 210 days, and the average annual temperature is 62 degrees Fahrenheit. Precipitation is plentiful and spread evenly throughout the year. July and August are the wettest months averaging 5 to 5.5 inches of rain each month. Average annual precipitation is 45 inches, and snowfall is less than 8 inches each year.

Thomasville was a city envisioned by John Warwick Thomas, and through his untiring efforts, practically built by him. The city was incorporated in 1857 on a site adjacent to a new railroad that was built between Lexington and High Point in the early 1850's. The original corporate limits enclosed one square mile.

FIGURE 1

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

APPROXIMATE SCALE

4 0 4 8 12 MILES

VICINITY MAP

Major industrial developments in Thomasville during the period 1900 to 1910 have had a lasting influence to this day. This decade witnessed the introduction of furniture and chair manufacturers. Thomasville has since become known as the "Chair City of the South."

The textile industry developed in Thomasville during the period between 1910 and 1930. Today, industry is somewhat more diversified than in the past. There are tool manufacturers, plastic products, and concrete makers in addition to the traditional industries. The furniture industry, however, remains the foundation of the Thomasville economy, and this is likely to continue for many years.

Development has occurred in the floodplains of some of the streams in Thomasville. Included in these streams are Charles Creek, Liberty Creek, Black Creek, Hunts Fork, Myers Creek, and Crest Creek. The development is mostly in the form of residential housing.

2.3 Principal Flood Problems

Flooding in Thomasville has not been a serious problem in the past according to Thomasville administrative and engineering personnel. Occasional flooding occurring in low-lying areas is mostly due to short duration rains of high intensity. Serious flooding, however, has not been recorded in any known written record. The computed 100-year flood elevation at a private residence off Black Creek and near Doak Street is shown in Figure 2.

2.4 Flood Protection Measures

There are no projects that provide flood protection for Thomasville. Based on information contained in this study, floodplain regulations will be implemented by the city to preclude extensive flood damages to future development.

3.0 ENGINEERING METHODS

For flooding sources studied in the community, standard hydrologic and hydraulic study methods were used to determine the flood hazard data required for this study. Floods having recurrence intervals of 10- and 100-years were evaluated for those streams with drainage areas less than 1.5 square miles (modified detailed studies). For those streams with drainage areas greater than 1.5 square miles (detailed studies), floods with recurrence intervals of 10-, 50-, 100-, and 500-years were evaluated. These evaluations were utilized as they have special significance in floodplain management and for flood insurance premium rates. The analyses reported here reflect current conditions in the drainage areas of the streams.

FIGURE 2: Computed 100-year flood height at a residence near Black Creek approximately 100 feet upstream from Doak Street.

3.1 Hydrologic Analyses

Hydrologic analyses were carried out to establish peak discharge-frequency relationships for floods of the selected recurrence intervals for each flooding source studied in detail in the community.

The analyses were carried out using a combination of two methods developed by the USGS to establish peak discharge-frequency relationships for selected flood frequencies. The first method considers watershed urbanization and was developed by Putnam (Reference 2), and the other is given in USGS publication No. 76-17 (Reference 3).

The Putnam report related flood peak discharges for recurrence intervals ranging up to 100 years to drainage area, stream length, stream slope, and percent of basin covered by impervious surfaces. The relations were based on statistical analysis of flood information for approximately 200 sites, 42 of which were in metropolitan areas of the North Carolina Piedmont Province. The estimating relations were limited to providing flood discharge at open-channel sites in the Piedmont province of North Carolina where runoff was unaffected by artificial storage or diversion.

The USGS publication No. 76-17 estimated the magnitude and frequency of floods on natural North Carolina streams with drainage areas greater than 0.5 square mile (1.3 square kilometers). For 257 gage sites, the magnitudes of floods having recurrence intervals from 2- to 100-years were provided in tables. For ungaged sites, equations, graphs, and maps were presented for estimating flood magnitudes. Multiple regression techniques were used to define the relation between flood peak discharges and seven basins and climatic variables. Through regression analysis, stations were divided into Coastal Plain section and the mountains and Piedmont section. The statistical equations were developed for each geographic area.

The Log-Pearson Type III method (Reference 4) was used to provide guidelines for hydrologic analyses, based on 22 stream gauges in the surrounding area. The 500-year flood peak discharge was obtained by extrapolating the data from the 10-, 50-, and the 100-year floods.

The location of the twenty-two stream gauges and years of record are as follows:

Station No.	Station Name Location	Length of Record
02115500	Forbush Creek near Yadkinville	33 years
02111000	Yadkin River at Patterson	33 years
02111500	Reddies Creek at Wilkesboro	34 years
02120500	Third Creek at Cleveland	32 years
02138500	Linville River at Nebo	51 years

Station No.	Station Name Location	Length of Record
02143000	Henry Fork near Henry River	39 years
02103500	Little River near Linden	44 years
02099000	E. Fork Deep River near High Point	45 years
02098500	W. Fork Deep River near High Point	42 years
02095000	South Buffalo Creek at Greensboro	29 years
02094000	Horsepen Creek at Battleground	30 years
02068500	Dan River near Francisco	48 years
02112000	Yadkin River at Wilkesboro	47 years
02117500	Rocky Creek at Turnersburg	33 years
02118000	S. Yadkin River near Mocksville	35 years
02123500	Uwharrie River near Eldorado	33 years
02127000	Brown Creek near Polkton	36 years
02138000	Catawba River at Marion	33 years
02145000	S. Fork Catawba River at Lowell	31 years
02151500	Board River Near Boiling Springs	47 years
02152500	1st Broad River near Lawndale	34 years
02099500	Deep River near Randleman	43 years

The peak discharge-drainage area relationships for the selected recurrence intervals are presented in Table 1, "Summary of Discharges."

TABLE 1 - SUMMARY OF DISCHARGES

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (sq. miles)	PEAK DISCHARGES (cfs) 10-YEAR	50-YEAR	100-YEAR	500-YEAR
HAMBY CREEK					
Lake Road	5.7	1200	2000	2400	3320
Kendall Mill Road	4.4	1025	1800	2150	3000
Fisher Ferry Street	4.1	950	1690	2000	2800
Ferndale Dr.	3.0	790	1400	1700	2400
Above Douty Creek Confluence	1.6	600	1300	1580	2250
HANKS BRANCH					
Cross Section A	1.9	830	1410	1690	2330
Young Street	1.6	645	1280	1520	2100
HUNTS FORK					
Below Huntsford Creek Confluence	3.2	880	1460	1720	2340
Above Huntsford Creek Confluence	2.8	810	1320	1550	2120

TABLE 1 - SUMMARY OF DISCHARGES - continued

Below Myers Creek Confluence	2.3	720	1170	1380	1880
Above Myers Creek Confluence	2.0	630	1020	1200	1640
Cross Section O	1.7	610	960	1120	1520
NORTH HAMBY CREEK					
Lake Road	3.7	920	1620	1920	2680
Wastewater Treatment Plant Road	2.8	850	1500	1800	2500
Southern Railway	2.0	720	1275	1525	2150
Fisher Ferry Street	1.7	660	1190	1450	2000

3.2 Hydraulic Analyses

Analyses of the hydraulic characteristics of the streams in the community were carried out to provide estimates of the elevations of floods of the selected recurrence intervals along each stream studied in detail.

Cross section data for the streams in the study area were obtained by field surveys. All bridges and culverts were field surveyed to obtain elevation data and structural geometry. Cross sections were located at close intervals upstream and downstream of bridges and culverts in order to compute significant backwater effects of these structures. The locations of selected cross sections used in the hydraulic analyses are shown on the Flood Profiles (Exhibit 1). For stream segments for which a floodway is computed (Section 4.2), selected cross section locations are also shown on the Flood Boundary and Floodway Map (Exhibit 3).

Roughness coefficients (Manning's "n") for the computations were estimated on the basis of field inspection. The roughness coefficients ranged from 0.015 to 0.07 for the main channel and 0.03 to 0.10 for the overbank areas.

Flood profiles were drawn showing computed water-surface elevations to an occuracy of 0.5 foot for floods of the selected recurrence intervals (Exhibit 1). Water-surface elevations of floods of the selected recurrence intervals were developed using the COE HEC-2 computer program (Reference 5).

The starting water-surface elevations were obtained by the slope-area method.

All elevations used in this study are referenced to National Geodetic Vertical Datum of 1929 (NGVD); the elevation reference marks used in this study are shown and described on the maps.

Flood elevations in the City of Thomasville may be raised by debris blockage of the streams in the study area. The hydraulic analyses for this study, however, are based only on the effect of unobstructed flow. The flood elevations as shown on the profiles are thus considered valid only if hydraulic structures in general remain unobstructed and do not fail.

4.0 FLOOD PLAIN MANAGEMENT APPLICATIONS

A prime purpose of the National Flood Insurance Program is to encourage state and local governments to adopt sound flood plain management programs. Each Flood Insurance Study, therefore, includes a flood boundary map designed to assist communities in developing sound flood plain management measures.

4.1 Flood Boundaries

In order to provide a national standard without regional discrimination the 100-year flood has been adopted by the FIA as the base flood for purposes of flood plain management measures. The 500-year flood is employed to indicate additional areas of flood risk in the community. For each stream studied in detail, the boundaries of the 100-year and the 500-year floods have been delineated using the flood elevations determined at each cross section; between cross sections, the boundaries were interpolated using USGS topographic maps enlarged to a scale of 1:6,000, with a contour interval of 10 feet (Reference 6).

In cases where the 100-year and the 500-year flood boundaries are close together, only the 100-year boundary has been shown.

The boundaries of the 100- and 500-year floods are shown on the Flood Boundary and Floodway Map (Exhibit 3), small areas within the flood boundaries may lie above the flood elevations, and therefore, not be subject to flooding, owing to limitations of the map scale, or lack of detailed topographic data, such areas are not shown.

4.2 Floodways

Encroachment on flood plains, such as artificial fill, reduces the flood-carrying capacity, increases the flood heights of streams, and increases flood hazards in areas beyond the encroachment itself. One aspect of

flood plain management involves balancing the economic gain from flood plain development against the resulting increase in flood hazard. For purposes of the Flood Insurance Program, the concept of a floodway is used as a tool to assist local communities in this aspect of flood plain management. Under this concept, the area of the 100-year flood is divided into a floodway and a floodway fringe. The floodway is the channel of a stream, plus any adjacent flood plain areas that must be kept free of encroachment in order that the 100-year flood may be carried without substantial increases in flood heights. Minimum standards of the FIA limit such increases in flood heights to 1.0 foot, provided that hazardous velocities are not produced. The floodways in this report are presented to local agencies as minimum standards that can be adopted or that can be used as a basis for additional studies.

The floodway presented for this study was computed on a basis of equal conveyance reduction from each side of the flood plain. The results of these computations are tabulated at selected cross sections for Hamby Creek, Hanks Branch, Huntsford Creek, and North Hamby Creek (Table 2).

Floodways were not computed for the remainder of the streams in this study because the drainage areas of these streams are less than 1.5 square miles each.

The area between the floodway and the boundary of the 100-year flood is termed the floodway fringe. The floodway fringe thus encompasses the portion of the flood plain that could be completely obstructed without increasing the water-surface elevation of the 100-year flood more than one foot at any point. Typical relationships between the floodway and the floodway fringe and their significance to flood plain development are shown in Figure 3.

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
HUNTS FORK								
A	19,860	110	883	1.9	735.6	735.6	736.6	1.0
B	22,190	180	259	6.6	739.5	739.5	739.5	0.0
C	23,500	90	299	5.2	743.5	743.5	743.6	0.1
D	23,890	70	198	7.8	745.5	745.5	745.5	0.0
E	26,300	210	1604	0.9	762.8	762.8	763.1	0.3
F	27,560	150	257	5.4	764.7	764.7	764.7	0.0
G	29,700	130	209	5.7	780.2	780.2	780.2	0.0
H	31,420	50	131	9.2	792.7	792.7	792.7	0.0
I	32,600	50	106	11.3	807.5	807.5	807.5	0.0
J	33,700	60	204	5.5	816.0	816.0	816.1	0.1
K	34,480	80	188	6.0	823.0	823.0	823.0	0.0
L	35,365	60	914	1.2	842.5	842.5	842.6	0.1
M	36,200	60	611	1.8	842.6	842.6	842.9	0.3
N	36,880	90	555	1.9	843.2	843.2	844.0	0.8
O	37,350	70	264	2.7	846.2	846.2	847.0	0.8
HASTY CREEK								
A	6250	45	196	5.6	751.2	751.2	752.2	1.0
B	6980	55	180	6.1	757.3	757.3	757.8	0.5
C	7500	50	185	5.9	763.5	763.5	763.5	0.0
D	8100	40	158	5.4	767.3	767.3	768.2	0.9

[1]FEET ABOVE MOUTH

REVISED 6-4-90

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

FLOODWAY DATA

HUNTS FORK--HASTY CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC.)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
NORTH HAMBY CREEK								
A	3410	115	655	2.9	737.3	737.3	737.8	0.5
B	5880	75	207	9.0	742.5	742.5	742.5	0.0
C	7700	65	600	3.0	761.8	761.8	762.4	0.6
D	9710	50	396	4.5	768.1	768.1	768.8	0.7
E	10,995	210	412	4.3	774.9	774.9	774.9	0.0
F	12,180	210	700	2.5	778.2	778.2	779.1	0.9
G	14,220	170	287	5.6	786.0	786.0	786.0	0.0
H	16,025	70	253	6.0	795.2	795.2	795.2	0.0
I	16,868	50	165	9.2	800.4	800.4	800.4	0.0
J	18,000	60	318	4.6	803.8	803.8	804.8	1.0
K	18,290	50	211	4.9	807.3	807.3	308.2	0.9
L	19,140	29	198	7.0	808.9	808.9	809.3	0.4
M	20,175	100	305	4.5	814.7	814.7	815.3	0.6
N	20,690	147	291	4.7	817.6	817.6	818.0	0.4
O	21,180	35	221	5.9	819.6	819.6	820.4	0.8
P	22,190	30	190	6.6	824.8	824.8	825.4	0.6
Q	22,825	90	601	2.0	832.7	832.7	833.1	0.4
R	23,565	170	1129	1.0	838.2	838.2	838.4	0.2
S	24,070	160	1084	1.0	838.3	838.3	838.8	0.5
T	24,550	135	740	1.3	838.3	838.3	838.8	0.5
U	24,990	45	237	4.0	842.2	842.2	842.2	0.0
V	25,700	69	191	4.4	844.2	844.2	844.4	0.2
W	26,200	90	342	2.5	847.3	847.3	847.6	0.3

[1]FEET ABOVE MOUTH

REVISED 6/4/90

TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

FLOODWAY DATA

NORTH HAMBY CREEK

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/SEC)	REGULATORY (FEET NGVD)	WITHOUT FLOODWAY (FEET NGVD)	WITH FLOODWAY (FEET NGVD)	INCREASE (FEET)
SOUTH HAMBY CREEK								
A	45,035	140	624	3.5	747.7	747.7	748.1	0.4
B	46,715	40	441	4.9	753.7	753.7	753.7	0.0
C	49,310	40	169	11.8	767.9	767.9	767.9	0.0
D	50,265	45	310	6.4	774.4	774.4	774.4	0.0
E	51,775	60	463	4.3	782.4	782.4	782.8	0.4
F	52,700	100	357	4.7	785.4	785.4	786.2	0.8
G	53,500	30	150	11.2	795.3	795.3	795.3	0.0
H	53,840	100	454	3.7	798.8	798.8	798.9	0.1
I	54,500	110	431	3.7	801.1	801.1	801.9	0.8
J	55,050	150	1399	1.1	816.8	816.8	817.7	0.9
K	55,560	40	327	2.9	816.8	816.8	817.7	0.9
HANKS BRANCH								
A	4800	60	277	5.9	723.0	723.0	723.0	0.0
B	6045	125	330	4.6	730.9	730.9	730.9	0.0
C	6670	80	297	5.1	732.1	732.1	732.1	0.0
D	7100	50	224	6.7	733.3	733.3	733.4	0.1
E	7600	50	272	4.6	736.5	736.5	736.5	0.0
F	8275	40	159	7.9	739.5	739.5	739.6	0.1
G	8870	50	272	4.5	748.3	748.3	748.3	0.0

[1]FEET ABOVE MOUTH

REVISED 6/4/90

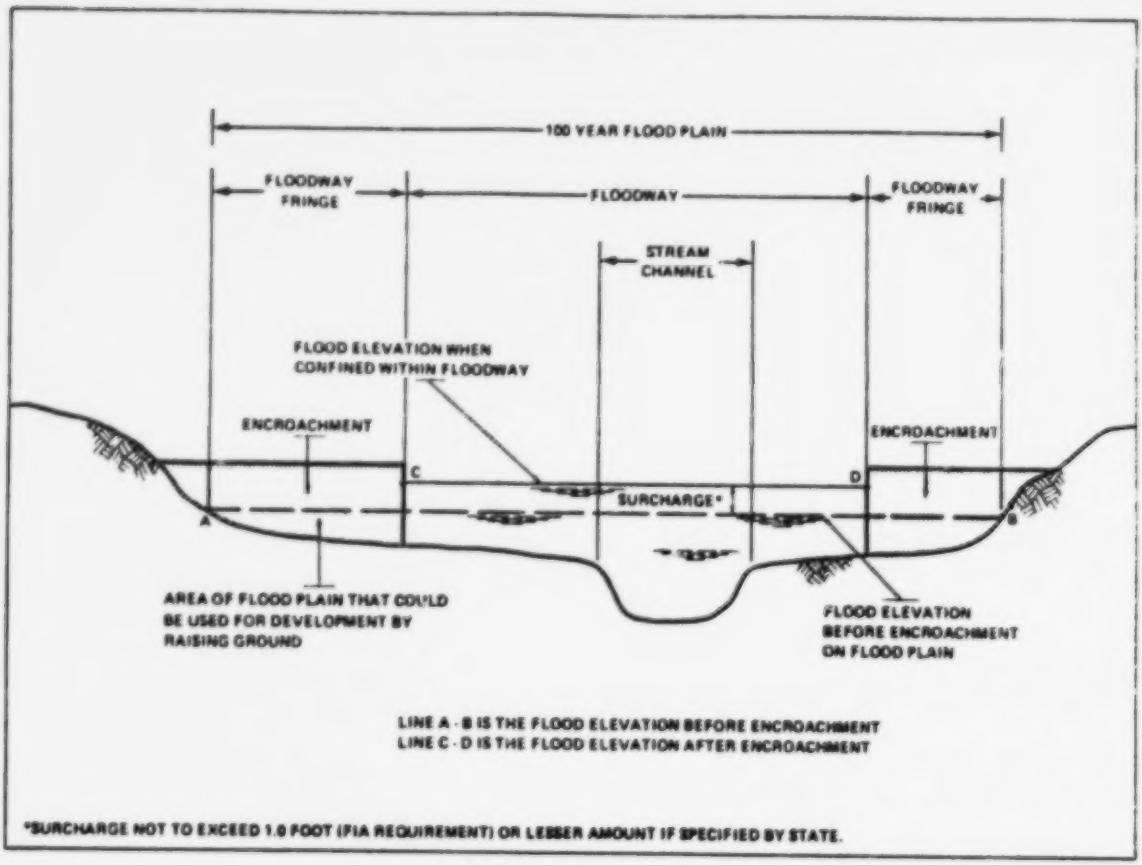
TABLE 2

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

FLOODWAY DATA

SOUTH HAMBY CREEK—HANKS BRANCH


100 YEAR FLOOD PLAIN
FLOODWAY FRINGE
FLOODWAY
FLOODWAY FRINGE
STREAM CHANNEL
FLOOD ELEVATION WHEN CONFINED WITHIN FLOODWAY
ENCROACHMENT
ENCROACHMENT
C
D
SURCHARGE*
A
B
AREA OF FLOOD PLAIN THAT COULD BE USED FOR DEVELOPMENT BY RAISING GROUND
FLOOD ELEVATION BEFORE ENCROACHMENT ON FLOOD PLAIN
LINE A - B IS THE FLOOD ELEVATION BEFORE ENCROACHMENT
LINE C - D IS THE FLOOD ELEVATION AFTER ENCROACHMENT
*SURCHARGE NOT TO EXCEED 1.0 FOOT (FIA REQUIREMENT) OR LESSER AMOUNT IF SPECIFIED BY STATE.

FLOODWAY SCHEMATIC Figure 3

5.0 INSURANCE APPLICATION

In order to establish actuarial insurance rates, the FIA has developed a process to transform the data from the engineering study into flood insurance criteria. This process includes the determination of reaches, Flood Hazard Factors (FHFs), and flood insurance zone designations for each flooding source studied in detail affecting the City of Thomasville.

FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FHF	ZONE	BASE FLOOD ELEVATION[3] (NGVD)
		10% (10 YR.)	2% (50 YR.)	0.2% (500 YR.)			
Huntsford Creek							
Reach 1	0002	-1.0	-	-	010	A2	Varies
Hunts Fork							
Reach 1	0002	-5.0	-0.6	+0.8	050	A10	Varies
Reach 2	0002	-2.8	-0.6	+0.9	030	A6	Varies
Reach 3	0002	-2.2	-0.5	+0.7	020	A4	Varies
Reach 4	0002	-1.2	-	-	010	A2	Varies
Kyle Creek							
Reach 1	0002,0004	-0.9	-	-	010	A2	Varies
Leonard Creek							
Reach 1	0004	1.4	-	-	015	A3	Varies

[1] FLOOD INSURANCE RATE MAP PANEL
[2] WEIGHTED AVERAGE
[3] ROUNDED TO NEAREST FOOT – SEE MAP

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

FLOOD INSURANCE ZONE DATA

HUNTSFORD CREEK-HUNTS FORK-KYLE CREEK-LEONARD CREEK

FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FHF	ZONE	BASE FLOOD ELEVATION[3] (NGVD)
		10% (10 YR.)	2% (50 YR.)	0.2% (500 YR.)			
North Hamby Creek							
Reach 1	0002,0003 0004	-2.2	-0.7	+1.1	020	A4	Varies
Reach 2	0002	-2.8	-	-	030	A6	Varies
Reach 3	0002	-2.2	-	-	020	A4	Varies
Pineywood Branch							
Reach 1	0001	-1.5	-	-	015	A3	Varies
Regan Creek							
Reach 1	0002	-1.5	-	-	015	A3	Varies
Reach 2	0002	-1.0	-	-	010	A2	Varies
Reach 3	0002	-0.7	-	-	005	A1	Varies
School Creek							
Reach 1	0002	-1.2	-	-	010	A2	Varies

[1]FLOOD INSURANCE RATE MAP PANEL
[2]WEIGHTED AVERAGE
[3]ROUNDED TO NEAREST FOOT – SEE MAP

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC

(DAVIDSON CO.)

FLOOD INSURANCE ZONE DATA

NORTH HAMBY CREEK-PINEYWOOD BRANCH
REGAN CREEK-SCHOOL CREEK

FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FHF	ZONE	BASE FLOOD ELEVATION[3] (NGVD)
		10% (10 YR.)	2% (50 YR.)	0.2% (500 YR.)			
Beck Creek							
Reach 1	0002	-0.8	-	-	010	A2	Varies
Black Creek							
Reach 1	0002	-2.7	-	-	025	A5	Varies
Reach 2	0002	-7.1	-	-	070	A14	Varies
Reach 3	0002	-5.6	-	-	055	A11	Varies
Reach 4	0002	-3.2	-	-	030	A6	Varies
Reach 5	0002	-1.3	-	-	015	A3	Varies
Reach 6	0002	-0.6	-	-	005	A1	Varies
Brooke Branch							
Reach 1	0002	-0.6	-	-	005	A1	Varies
Reach 2	0002	-1.2	-	-	010	A2	Varies
Carlan Creek							
Reach 1	0004	-1.3	-	-	015	A3	Varies

[1]FLOOD INSURANCE RATE MAP PANEL
[2]WEIGHTED AVERAGE
[3]ROUNDED TO NEAREST FOOT – SEE MAP

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

FLOOD INSURANCE ZONE DATA

BECK CREEK-BLACK CREEK-BROOKE BRANCH-CARLAN CREEK

FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FHF	ZONE	BASE FLOOD ELEVATION[3] (NGVD)
		10% (10 YR.)	2% (50 YR.)	0.2% (500 YR.)			
Davidson Creek							
Reach 1	0004	-1.5	-	-	015	A3	Varies
Douty Creek							
Reach 1	0004	-1.4	-	-	015	A3	Varies
East Creek							
Reach 1	0004	-1.5	-	-	015	A3	Varies
Hall Creek							
Reach 1	0002	-1.8	-	-	020	A4	Varies
Reach 2	0002	-0.6	-	-	005	A1	Varies
Hamby Creek							
Reach 1	0003,0004	-2.1	-0.3	+1.2	020	A4	Varies
Reach 2	0004	-9.3	-	-	095	A19	Varies

[1] FLOOD INSURANCE RATE MAP PANEL
[2] WEIGHTED AVERAGE
[3] ROUNDED TO NEAREST FOOT – SEE MAP

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

FLOOD INSURANCE ZONE DATA

DAVIDSON CREEK-DOUTY CREEK - EAST CREEK-HALL CREEK-HAMBY CREEK

FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FHF	ZONE	BASE FLOOD ELEVATION[3] (NGVD)
		10% (10 YR.)	2% (50 YR.)	0.2% (500 YR.)			
Hamby Creek (Continued)							
Reach 3	0004	-2.5	-	-	025	A5	Varies
Reach 4	0004	-7.1	-	-	070	A14	Varies
Reach 5	0004	-5.0	-	-	050	A10	Varies
Reach 6	0004	-2.8	-	-	030	A6	Varies
Reach 7	0004	-0.6	-	-	005	A1	Varies
Hanks Branch							
Reach 1	0001,0002	-2.7	-0.8	+1.5	025	A5	Varies
Reach 2	0002	-1.3	-	-	015	A3	Varies
Hogeye Creek							
Reach 1	0002	-1.3	-	-	015	A3	Varies

[1]FLOOD INSURANCE RATE MAP PANEL
[2]WEIGHTED AVERAGE
[3]ROUNDED TO NEAREST FOOT – SEE MAP

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

FLOOD INSURANCE ZONE DATA

HAMBY CREEK-HANKS BRANCH - HOGEYE CREEK

FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FHF	ZONE	BASE FLOOD ELEVATION[3] (NGVD)
		10% (10 YR.)	2% (50 YR.)	0.2% (500 YR.)			
Charles Creek							
Reach 1	0004	-1.5	-	-	015	A3	Varies
Reach 2	0004	-2.4	-	-	025	A5	Varies
Reach 3	0004	-1.0	-	-	010	A2	Varies
Reach 4	0004	-2.5	-	-	025	A5	Varies
Reach 5	0004	-0.8	-	-	010	A2	Varies
Crest Creek							
Reach 1	0002	-0.9	-	-	010	A2	Varies
Crooked Creek							
Reach 1	0002	-1.2	-	-	010	A2	Varies
Cucumber Creek							
Reach 1	0002	-0.5	-	-	005	A1	Varies

[1]FLOOD INSURANCE RATE MAP PANEL
[2]WEIGHTED AVERAGE
[3]ROUNDED TO NEAREST FOOT – SEE MAP

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

FLOOD INSURANCE ZONE DATA

CHARLES CREEK- CREST CREEK-CROOKED CREEK-CUCUMBER CREEK

FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FHF	ZONE	BASE FLOOD ELEVATION[3] (NGVD)
		10% (10 YR.)	2% (50 YR.)	0.2% (500 YR.)			
Liberty Creek							
Reach 1	0004	-1.1	-	-	010	A2	Varies
Reach 2	0004	-1.8	-	-	020	A4	Varies
Reach 3	0004	-1.1	-	-	010	A2	Varies
Reach 4	0004	-1.6	-	-	015	A3	Varies
Mitchell Creek							
Reach 1	0004	-0.6	-	-	005	A1	Varies
Myers Creek							
Reach 1	0002	-2.1	-	-	020	A4	Varies
Reach 2	0002	-1.1	-	-	010	A2	Varies
Reach 3	0002	-4.3	-	-	045	A9	Varies
Reach 4	0002	-2.6	-	-	025	A5	Varies
Reach 5	0002	-0.5	-	-	005	A1	Varies

[1]FLOOD INSURANCE RATE MAP PANEL
[2]WEIGHTED AVERAGE
[3]ROUNDED TO NEAREST FOOT – SEE MAP

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

FLOOD INSURANCE ZONE DATA

LIBERTY CREEK-MITCHELL CREEK-MYERS CREEK

FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FHF	ZONE	BASE FLOOD ELEVATION[3] (NGVD)
		10% (10 YR.)	2% (50 YR.)	0.2% (500 YR.)			
Short Creek							
Reach 1	0002	-0.6	-	-	005	A1	Varies
Small Creek							
Reach 1	0002	-0.7	-	-	005	A1	Varies
Sour Creek							
Reach 1	0002	-1.0	-	-	010	A2	Varies
Spencer Creek							
Reach 1	0004	-1.0	-	-	010	A2	Varies
Reach 2	0004	-3.3	-	-	035	A7	Varies
Reach 3	0004	-1.8	-	-	020	A4	Varies
Reach 4	0004	-4.3	-	-	045	A9	Varies
Reach 5	0004	-2.5	-	-	025	A5	Varies
Reach 6	0004	-1.2	-	-	010	A2	Varies

[1]FLOOD INSURANCE RATE MAP PANEL
[2]WEIGHTED AVERAGE
[3]ROUNDED TO NEAREST FOOT – SEE MAP

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

FLOOD INSURANCE ZONE DATA

SHORT CREEK-SMALL CREEK-SOUR CREEK-SPENCER CREEK

FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FHF	ZONE	BASE FLOOD ELEVATION[3] (NGVD)
		10% (10 YR.)	2% (50 YR.)	0.2% (500 YR.)			
Spitting Creek							
Reach 1	0004	-0.8	-	-	010	A2	Varies
Straight Creek							
Reach 1	0004	-0.9	-	-	010	A2	Varies
Trinity Creek							
Reach 1	0002	-1.0	-	-	010	A2	Varies
Reach 2	0002	-4.1	-	-	040	A8	Varies
Reach 3	0002	-2.0	-	-	020	A4	Varies
Reach 4	0002	-0.9	-	-	010	A2	Varies
Ward Creek							
Reach 1	0003,0004	-1.4	-	-	015	A3	Varies
Reach 2	0004	-2.3	-	-	025	A5	Varies
Reach 3	0004,0005	-1.1	-	-	010	A2	Varies

[1]FLOOD INSURANCE RATE MAP PANEL
[2]WEIGHTED AVERAGE
[3]ROUNDED TO NEAREST FOOT – SEE MAP

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

FLOOD INSURANCE ZONE DATA

SPITTING CREEK-STRAIGHT CREEK-TRINITY CREEK-WARD CREEK

FLOODING SOURCE	PANEL[1]	ELEVATION DIFFERENCE[2] BETWEEN 1.0% (100-YEAR) FLOOD AND			FHF	ZONE	BASE FLOOD ELEVATION[3] (NGVD)
		10% (10 YR.)	2% (50 YR.)	0.2% (500 YR.)			
Warner Creek							
Reach 1	0004	-5.0	-	-	050	A10	Varies
Reach 2	0004	-3.1	-	-	030	A6	Varies
Reach 3	0004	-1.7	-	-	015	A3	Varies
Reach 4	0004	-3.2	-	-	030	A6	Varies
Reach 5	0004	-1.7	-	-	015	A3	Varies
Reach 6	0004	-0.7	-	-	005	A1	Varies
Wash Creek							
Reach 1	0004	-0.8	-	-	010	A2	Varies
Reach 2	0004	-3.2	-	-	030	A6	Varies

[1]FLOOD INSURANCE RATE MAP PANEL
[2]WEIGHTED AVERAGE
[3]ROUNDED TO NEAREST FOOT – SEE MAP

TABLE 3

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

FLOOD INSURANCE ZONE DATA

WARNER CREEK-WASH CREEK

The FIA is currently conducting Flood Insurance Studies for the unincorporated areas of Davidson County, along with separate reports for incorporated towns. All technical data presented in this study are compatible with the other studies. This study is authoritative for flood insurance studies only.

7.0 LOCATION OF DATA

Survey, hydrologic, hydraulic, and other pertinent data used in this study can be obtained by contacting the office of the Federal Insurance Administration, Regional Director, 1371 Peachtree Street, N.E., Atlanta, Georgia 30309.

8.0 BIBLIOGRAPHY AND REFERENCES

1. Planning Board and Zoning Commission, Thomasville, N. C., Official Zoning Map, Scale 1" = 800', June 29, 1972.

2. Putnam, Arthur L., Effect of Urban Development on Floods in the Piedmont Province of North Carolina, U. S. Geological Survey, 1972.

3. Jackson, N. M., Jr., Magnitude and Frequency of Floods in North Carolina, U. S. Geological Survey Water Resources Investigations 76-17, March, 1976.

4. Water Resources Council Bulletin, No. 17, Guidelines for Determining Flood-Flow Frequency, March, 1976.

5. U. S. Army Corps of Engineers, HEC-2, Water-Surface Profiles, October, 1973.

6. U. S. Geological Survey Quadrangle Sheet, 7.5 Minute Series: High Point West, N.C. (1969) and Fair Grove, N. C. (1951). Scale of 1"=2000', contour interval = 10'.

7. U. S. Department of Housing & Urban Development, Federal Insurance Administration, Flood Hazard Boundary Map, revised July 2, 1976.

9.0 REVISIONS DESCRIPTION

This section has been added to provide information regarding significant revisions made since the original Flood Insurance Study was printed. Future revisions may be made that do not result in the republishing of the Flood Insurance Study report. To assure that any user is aware of all revisions, it is advisable to contact the community repository of flood hazard data located at the Engineering Office, Thomasville City Hall, 7 West Guilford, Thomasville, North Carolina.

9.1 First Revision (Revised June 4, 1990)

a. Acknowledgments

The hydraulic analyses for this Revisions Description were performed by the U.S. Army Corps of Engineers, Wilmington District, under the Limited Map Maintenance Program. The Federal Emergency Management Agency reviewed and accepted these data for purposes of this revision.

b. Scope

The hydraulic analyses and floodway for Hanks Branch, Hunts Fork, North Hamby Creek, and South Hamby Creek (referred to as Hamby Creek in the previously effective Flood Insurance Study for Thomasville) have been revised. The corporate and extraterritorial limits of Thomasville have been revised to reflect annexations by Thomasville. The annexed areas include most of the reach of Hasty Creek, which was previously studied in the Flood Insurance Study for the Unincorporated Areas of Davidson County, North Carolina (Reference 8). The hydraulic analyses for Hasty Creek have been revised and a floodway has been added.

c. Hydrologic and Hydraulic Analyses

The hydrologic analyses for all of the streams studied by either detailed or approximate methods have not been revised. The hydrologic analyses for Hasty Creek were taken from the currently effective Flood Insurance Study for Davidson County (Reference 8).

The hydraulic analyses for the downstream reaches of Hanks Branch, Hunts Fork, North Hamby Creek, and South Hamby Creek from the previously effective Flood Insurance Study for Thomasville have not been revised. However, newer, more detailed, topographic mapping (Reference 9) was used in this revision than was used in the previous study. The streams were restationed using the newer mapping, which revealed that several stream cross sections from the previous study had to be repositioned along the stream profiles in order to obtain a good match with the new topographic mapping. Therefore, the following profile segments for the 10-, 50-, 100-, and 500-year frequency floods have been replotted using the cross-section data from the previous study and the new stream cross-section stationing:

1. Hanks Branch - replotted from the Thomasville corporate limits upstream to Young Street;

2. Hunts Fork - replotted from the Thomasville corporate limits upstream to Albertson Road;

3. North Hamby Creek - replotted from the Thomasville extraterritorial limits upstream to a point located about 600 feet downstream of State Road 109;

4. South Hamby Creek - replotted from the Thomasville extraterritorial limits upstream to an access road located about 900 feet upstream of Fisher Ferry Street.

In the previously effective Thomasville study, the upstream reaches of the above streams were studied using modified detail methods, and the entire length of Hasty Creek was also studied using modified detail methods in the currently effective Davidson County study. Only 10- and 100-year profiles were calculated for these streams segments. Those stream segments have now been restudied using fully detailed methods, including 50- and 500-year frequency flood profiles. The new analyses were performed using the HEC-2 step-backwater computer program (Reference 10). The hydraulic models were developed using existing bridge and cross-section data along with additional cross sections taken from new Thomasville topographic mapping (Reference 9).

The new areas studied by detailed methods include the following:

1. Hanks Branch - from Young Street upstream to State Road 109.

2. Hasty Creek - from a point about 300 feet downstream of Hasty Hill Road upstream to Payne Road.

3. Hunts Fork - from Albertson Road upstream to Blair Road.

4. North Hamby Creek - from downstream of State Road 109 to just upstream of Mason Way.

5. South Hamby Creek - from the access road upstream of Fisher Ferry Street to a point located about 500 feet upstream of the High Point, Thomasville and Denton Railroad.

Upstream of those reaches, these streams have been restudied by approximate methods.

All other streams within Thomasville had been studied using modified detail methods in the previously effective Thomasville study. These streams have now been determined to be areas of minimal flooding hazard, except for Ward, Charles, and Spencer Creeks, which have been restudied by approximate methods.

d. Floodways

The previous floodway computations for the downstream segments of Hanks Branch, Hunts Fork, North Hamby Creek, and South Hamby Creek have not been revised, but the floodways have been redelineated using the new Thomasville topographic maps (Reference 9) at a scale of 1:2400 with a contour interval of 2 feet.

Due to the scope of the previously effective Flood Insurance Study for the City of Thomasville, a floodway was not determined for the upstream reaches of Hanks Branch, Hunts Fork, North Hamby Creek, and South Hamby Creek. Due to the scope of the currently effective Flood Insurance Study for Davidson County, a floodway was not determined for Hasty Creek. This Revisions Description incorporates the results of the new floodway analyses for these streams into the effective Flood Insurance Study for the City of Thomasville. The results of these analyses are shown in Table 2, Floodway Data.

e. Insurance Application

For flood insurance rating purposes, flood insurance zone designations are assigned to a community based on the results of the engineering analyses. These zones are as follows:

Zone A

Zone A is the flood insurance rate zone that corresponds to the 100-year floodplains that are determined in the Flood Insurance Study by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no base flood elevations or depths are shown within this zone.

Zone AE

Zone AE is the flood insurance rate zone that corresponds to the 100-year floodplains that are determined in the Flood Insurance Study by detailed methods. Whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.

Zone X

Zone X is the flood insurance rate zone that corresponds to areas outside the 100-year floodplain, areas of 100-year flooding where average depths are less than 1 foot, areas of 100-year flooding where the contributing drainage area is less than 1 square mile, and areas protected from the 100-year flood by levees. No base flood elevations or depths are shown within this zone.

The reach determinations, Flood Hazard Factors, and flood insurance zones presented in Sections 5.1, 5.2, and 5.3 of this report and Table 3, Flood Insurance Zone Data, are no longer applicable.

f. Flood Insurance Rate Map

The Flood Insurance Rate Map is designed for flood insurance and floodplain management applications.

For flood insurance applications, the map designates flood insurance rate zones as described in Section 9.1.e and, in the 100-year floodplains that were studied by detailed methods, shows selected whole-foot base flood elevations or average depths. Insurance agents use the zones and base flood elevations in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

For floodplain management applications, the map shows by tints, screens, and symbols the 100-year and 500-year floodplains, the floodways, and the locations of selected cross sections used in the hydraulic analyses and floodway computations.

g. Other Studies

This study is currently not in agreement with the Flood Insurance Study for the Unincorporated Areas of Davidson County, North Carolina (Reference 8). The revised information presented in this study supersedes the Davidson County Flood Insurance Study.

This study is in agreement with the Flood Insurance Study for Randolph County, North Carolina (Reference 11).

h. References and Bibliography

8. Federal Emergency Management Agency, Federal Insurance Administration, Flood Insurance Study, Davidson County, Unincorporated Areas, North Carolina, November 1979.

9. City of Thomasville, North Carolina, Department of Planning, Topographic Mapping, Scale 1:2400, Contour Interval 2 Feet: January 1974, revised March 1986.

10. U.S. Army Corps of Engineers, Hydrologic Engineering Center, HEC-2 Water Surface Profiles, Computer Programs 723-X6-L202A, Davis, California, April 1984.

11. Federal Emergency Management Agency, Federal Insurance Administration, Flood Insurance Study, Randolph County, Unincorporated Areas, North Carolina, January 1981.

ELEVATION REFERENCE MARKS

REFERENCE MARK	FLOOD INSURANCE RATE MAP PANEL	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
1	0001	772.34	80d nail in top left corner of downstream wheel guard of State Route 1779 bridge over Hasty Creek
2	0002	753.37	80d nail in top left corner of downstream wheel quare of State Route 1781 bridge over Hasty Creek
3	0002	813.056	railroad spike in base of power pole No. 84 located on left bank of Randolph Street bridge over North Hamby Creek
4	0002	816.252	chiseled "X" on top bolt head at left downstream end of Norfolk Southern Railway bridge over North Hamby Creek, about 200 feet south of west Taylor Street
5	0002	819.116	chiseled square on left downstream wing wall of Taylor Street bridge over North Hamby Creek
6	0002	824.393	chiseled square on left downstream headwall of box culvert at Ridgecrest Street bridge over North Hamby Creek
7	0002	833.514	railroad spike in base of power pole located on south side of Norfolk Southern Railway crossing at Julian Avenue
8	0002	835.774	chiseled square on right downstream corner of wing wall of twin pipe culvert under High Point, Thomasville and Denton Railroad bridge over North Hamby Creek, about 400 feet east of Julian Avenue
9	0002	837.219	chiseled square on top left downstream corner of box culvert at Sherman Street bridge over North Hamby Creek

ELEVATION REFERENCE MARKS

REFERENCE MARK	FLOOD INSURANCE RATE MAP PANEL	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
10	0002	843.681	chiseled square on top right downstream corner of box culvert at Liberty Drive bridge over North Hamby Creek
11	0002	867.073	chiseled square on top of left downstream corner of Mason Way bridge over North Hamby Creek
12	0002	864.310	chiseled square on top left downstream side of box culvert at High Point, Thomasville and Denton Railroad bridge over North Hamby Creek, about 1,000 feet upstream of Mason Way bridge
13	0002	881.208	railroad spike in base of power pole located approximately 50 feet northeast of Cucumber Road on south bank of North Hamby Creek
14	0002	820.03	chiseled square on top right upstream corner of brick headwall at Taylor Street bridge over Hogeye Creek
15	0002	826.44	chiseled square on upstream headwall of pipe arch located at Carolina Avenue bridge over Hogeye Creek
16	0002	830.797	chiseled square on top upstream headwall of pipe arch located at the intersection of Warner Street bridge over Hogeye Creek
17	0002	840.303	nail in base of power pole located just east of Julian Avenue on north bank of Hogeye Creek
18	0002	848.623	chiseled square on left upstream headwall of pipe under High Point, Thomasville and Denton Railroad bridge over Hogeye Creek

ELEVATION REFERENCE MARKS

REFERENCE MARK	FLOOD INSURANCE RATE MAP PANEL	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
19	0002	868.51	nail in root of 10 inch poplar tree located on west bank of Kyle Creek approximately 800 feet upstream of confluence with North Hamby Creek
20	0002	871.07	nail in base of 4 inch willow tree located on south bank of Cucumber Creek approximately 300 feet upstream of confluence with North Hamby Creek
21	0002	904.13	nail in base of 12 inch maple located on south bank of Cucumber Creek approximately 300 feet downstream from the County Line Road bridge
22	0002	869.95	railroad spike in base of telephone pole #15 located about 125 feet west of Trinity Street bridge over Trinity Creek, approximately 30 feet north of road
23	0002	733.41	0.5 inch slap bolt in base of power pole located approximately 60 feet south of Young Street bridge over Hanks Branch on east side of road
24	0002	763.29	0.5 inch slap bolt in base of power pole located on south side of Lodge Drive, approximately 350 feet east of intersection with Salem Street
25	0002	775.06	railroad spike in base of telephone pole located approximately 25 feet south of Culbreth Avenue bridge over Hanks Branch
26	0002	775.12	painted square on top left downstream headwall of concrete box culvert at Burke Trail Avenue bridge over Hanks Branch
27	0002	787.13	painted square on top left of headwall of concrete box culvert at Memorial Park Drive bridge over Hanks Branch

ELEVATION REFERENCE MARKS

REFERENCE MARK	FLOOD INSURANCE RATE MAP PANEL	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
28	0002	808.83	painted square on top left of headwall of concrete box culvert at Cox Avenue bridge over Hanks Branch
29	0002	819.47	painted square on top of cinder block wall located on the east bank of Hanks Branch, northwest of intersection of Culbreth Avenue and Brewer Street
30	0002	825.42	painted square on top downstream center of 64 inch diameter pipe at Griffith Street bridge over Hanks Branch
31	0002	743.85	0.5 inch slag bolt in base of power pole located on east side of Doak Street bridge over Black Creek
32	0002	759.42	0.5 inch slag bolt in base of power pole located at intersection of Young Street and Doak Street
33	0002	737.17	painted square on top upstream end of 60 inch diameter concrete pipe at Doak Street bridge over Brooke Branch
34	0002	792.24	painted square on top upstream end of 36 inch diameter concrete pipe at Fairview Road bridge over Brooke Branch
35	0002	790.68	top of fire hydrant on east side of Stadium Drive, approximately 150 feet south of bridge over Regan Creek
36	0002	798.31	0.5 inch slag bolt in base of power pole located on east side of Memorial Park Drive, approximately 40 feet north of bridge over Regan Creek
37	0002	811.05	0.5 inch slag bolt in base of power pole located on south side of Leonard Street, approximately 25 feet east of bridge over Regan Creek

ELEVATION REFERENCE MARKS

REFERENCE MARK	FLOOD INSURANCE RATE MAP PANEL	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
38	0002	817.06	chiseled square on top of upstream end of 36 inch pipe, approximately 500 feet upstream of Leonard Street bridge over Regan Creek
39	0002	831.31	0.5 inch slag bolt in base of power pole on northeast side of intersection of East Guilford Street and Park Avenue
40	0002	732.97	top bolt on southeast side of Ballpark Road over Hunts Fork
41	0002	746.01	painted square on left downstream headwall of Valley Road bridge over Hunts Fork
42	0002	758.82	painted square on top left downstream headwall of twin pipe culvert at Menderhall Road bridge over Hunts Fork
43	0002	785.91	top of fire hydrant located at intersection of Dover Drive and Overbrook Drive
44	0002	803.58	painted square on top left downstream concrete abutment of National Highway bridge over Hunts Fork
45	0002	822.67	painted square on top concrete curb of parking lot along north bank of Hunts Fork, about 500 feet east of National Highway
46	0002	822.16	top of bolt on left downstream side of Albertson Road bridge over Hunts Fork
47	0002	832.47	painted square on top left downstream headwall of pipe arch at Norfolk Southern Railway bridge over Hunts Fork

ELEVATION REFERENCE MARKS

REFERENCE MARK	FLOOD INSURANCE RATE MAP PANEL	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
48	0002	838.94	painted square on top upstream center of 54 inch diameter concrete pipe at Maiden Park Road bridge over Hunts Fork
49	0002	842.09	painted square on upstream end of 42 inch diameter concrete pipe at Blair Street bridge over Hunts Fork
50	0002	763.45	0.5 inch slag bolt in base of power pole No. M160 located at intersection of Pineneedle Lane and Huntsford Terrace
51	0002	822.68	top of fire hydrant located at intersection of Unity Street and Memorial Park Drive
52	0002	773.95	painted square on downstream end of 48 inch diameter concrete pipe at Circle Drive bridge over Myers Creek
53	0002	810.69	painted square on upstream end of 84 inch concrete pipe arch at Kinreed Drive bridge over Myers Creek
54	0002	821.06	painted square on top left downstream headwall of box culvert at National Highway bridge over Myers Creek
55	0002	828.62	painted square on top left upstream headwall of 48 inch diameter concrete pipe at Turner Street bridge over Myers Creek
56	0002	823.35	painted square on top downstream center of 48 inch diameter concrete pipe at Burgin Street bridge over Hall Creek
57	0002	869.04	top of fire hydrant located at intersection of Maple Avenue and East Guilford Street

ELEVATION REFERENCE MARKS

REFERENCE MARK	FLOOD INSURANCE RATE MAP PANEL	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
58	0002	856.95	painted square on upstream end of 30 inch diameter concrete pipe at Crestview Drive bridge over Crest Creek
59	0002	864.91	painted square on upstream end of 30 inch diameter concrete pipe at Hill Top Road bridge over Crest Creek
60	0002	822.42	0.5 inch slag bolt in base of telephone pole located at intersection of Blair Street and Maiden Park Road
61	0002	858.05	painted square on top left downstream wing wall of 36 inch diameter concrete pipe at private drive bridge over Crooked Creek at county boundary
62	0002	837.04	PK nail located in centerline of intersection of Memorial Drive and Culbreth Avenue
63	0003	746.46	top of bolt head on southeast corner of wheelguard of Lake Road bridge over South Hamby Creek
64	0003	741.936	nail in base of 8 inch oak located on north bank of Ward Creek, approximately 400 feet upstream from confluence with South Hamby Creek
65	0003	738.136	top of lag bolt on downstream left end of Lake Road bridge over North Hamby Creek
66	0003	765.187	nail in left downstream corner of Field Road bridge over North Hamby Creek
67	0003	773.953	chiseled square on left downstream corner of headwall of twin pipe culvert at Farmview Road bridge over North Hamby Creek

ELEVATION REFERENCE MARKS

REFERENCE MARK	FLOOD INSURANCE RATE MAP PANEL	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
68	0004	758.28	top of bolt on southwest corner of State Route 2060 bridge over South Hamby Creek
69	0004	772.30	top bolt on southwest corner of Fisher Ferry Street bridge over South Hamby Creek
70	0004	769.94	chiseled square on top northwest corner of twin concrete pipes under access road bridge over South Hamby Creek, approximately 1,030 feet upstream from Fisher Ferry Street bridge
71	0004	782.00	chiseled square on top southeast corner of concrete handrail of Ferndale Drive bridge over South Hamby Creek
72	0004	785.54	railroad spike in base of 12 inch walnut tree located on north bank of South Hamby Creek, approximately 150 feet downstream from confluence of Spencer Creek
73	0004	821.635	chiseled square on concrete curb on south side of Randolph Street bridge over South Hamby Creek
74	0004	825.596	chiseled square on southeast corner of headwall of 54 inch concrete pipe at Liberty Drive bridge over South Hamby Creek
75	0004	833.384	chiseled square on top downstream end of concrete pipe at private drive bridge over South Hamby Creek, approximately 900 feet along Cloniger Street from intersection with Liberty Drive
76	0004	837.345	painted square on top downstream end of corrugated metal pipe at Cloniger Street bridge over South Hamby Creek

ELEVATION REFERENCE MARKS

REFERENCE MARK	FLOOD INSURANCE RATE MAP PANEL	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
77	0004	850.680	chiseled square on top downstream end of concrete pipe at Holly Hill Road bridge over South Hamby Creek
78	0004	865.470	nail in base of 8 inch willow tree located on south bank of South Hamby Creek, approximately 2,250 feet upstream of Holly Hill Road bridge
79	0004	761.883	painted square on top downstream end of pipe at Kendall Mill Road bridge over Ward Creek
80	0004	799.472	nail in railroad tie in centerline of High Point, Thomasville and Denton Railroad bridge over Wards Creek
81	0004	794.663	nail in base of telephone pole No. 55 at Fisher Ferry Street bridge over Ward Creek
82	0004	771.119	top of bolt on left downstream wheel guard of Smith Drive bridge over Charles Creek
83	0004	816.843	nail in centerline of High Point, Thomasville and Denton Railroad bridge over Charles Creek
84	0004	812.760	lag bolt in base of power pole on north bank of Charles Creek just east of the Hillcrest Drive bridge
85	0004	820.670	chiseled square on top northeast corner of upstream headwall of concrete pipe at Maplewood Avenue bridge over Charles Creek
86	0004	827.883	chiseled square on top northeast corner of headwall of box culvert of Highway No. 109 bridge over Charles Creek

ELEVATION REFERENCE MARKS

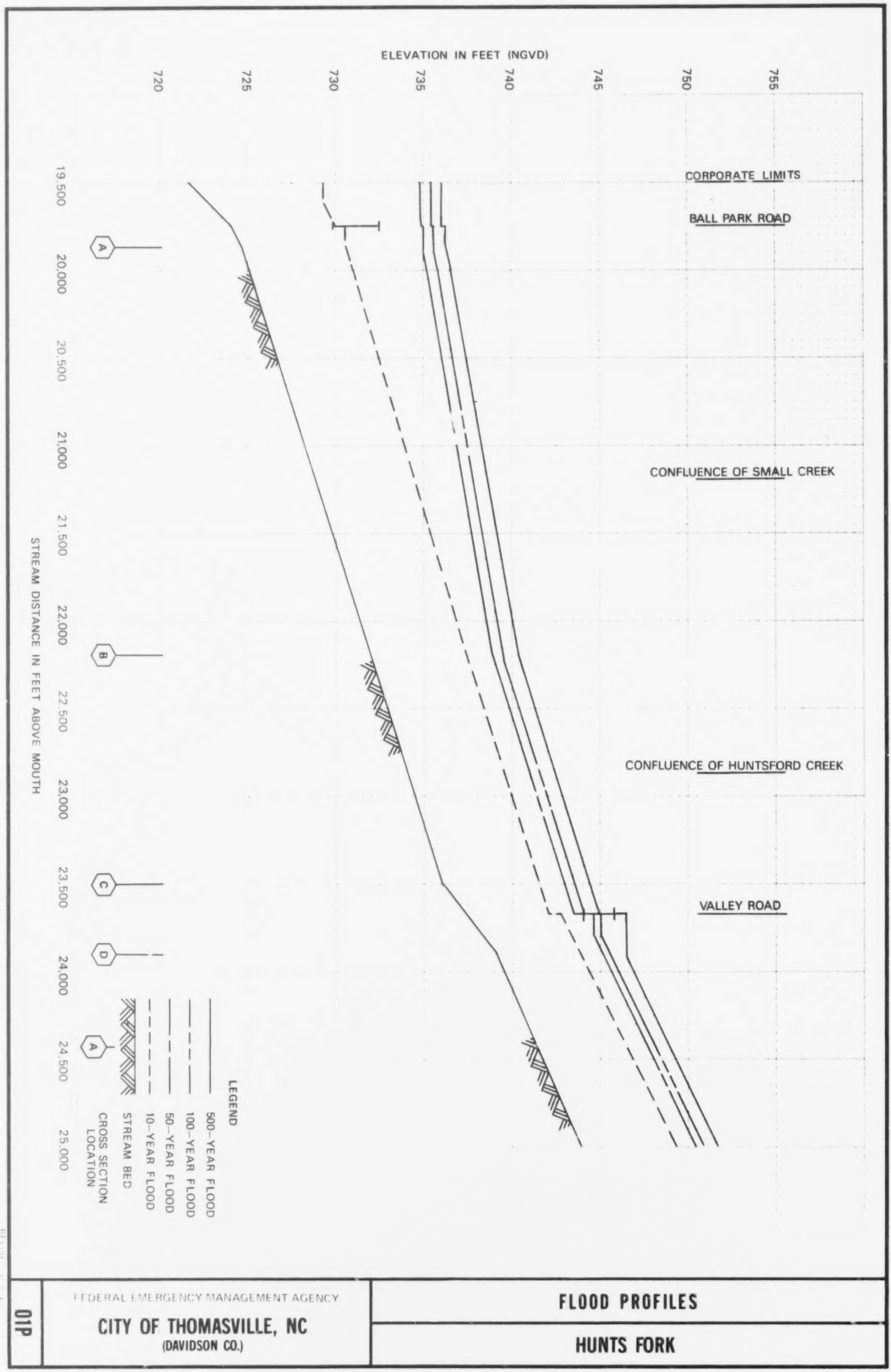
REFERENCE MARK	FLOOD INSURANCE RATE MAP PANEL	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
87	0004	829.438	chiseled square on top right downstream headwall of 60 inch diameter pipe at Fair Grove Road bridge over Charles Creek
88	0004	837.897	chiseled square on downstream end of corrugated metal pipe arch at Carolina Avenue bridge over Charles Creek
89	0004	840.679	chiseled square on downstream end of corrugated metal pipe arch at Lambeth Drive bridge over Charles Creek
90	0004	807.423	chiseled square on top upstream end of concrete pipe at High Point, Thomasville and Denton Railroad bridge over Spencer Creek
91	0004	825.167	chiseled square on southeast corner of headwall of concrete box culvert at Randolph Street bridge over Spencer Creek
92	0004	842.830	chiseled square on top upstream end of corrugated metal pipe at Raleigh Road bridge over Spencer Creek
93	0004	818.20	railroad spike in base of power pole No. 11 located on Welloske Drive bridge over Douty Creek
94	0004	819.136	lag bolt in base of telephone pole located on southwest corner of intersection of Cloniger Street and Randolph Street
95	0004	838.493	chiseled square on northeast corner of drop inlet at Liberty Drive bridge over Warner Creek
96	0004	854.191	lag bolt in base of telephone pole at Holly Hill Road bridge over Warner Creek

ELEVATION REFERENCE MARKS

REFERENCE MARK	FLOOD INSURANCE RATE MAP PANEL	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
97	0004	840.942	chiseled square on top upstream end of concrete pipe at East Holly Hill Road bridge over Liberty Creek
98	0004	851.181	chiseled square on top downstream end of corrugated metal pipe at Liberty Drive bridge over Liberty Creek
99	0004	873.68	chiseled square on south corner of drop inlet at Duke Street bridge over Liberty Creek
100	0004	807.643	cross cut on top left downstream end of railroad trestle at Norfolk Southern Railway bridge over North Hamby Creek, approximately 700 feet downstream of Carmalt Street bridge
101	0004	805.318	chiseled square on left downstream handrail of Carmalt Street bridge over North Hamby Creek
102	0004	807.881	top of bolt on left downstream end of Norfolk Southern Railway bridge over North Hamby Creek, approximately 150 feet downstream of Fisher Ferry Street bridge
103	0004	805.668	chiseled square on left downstream end of Fisher Ferry Street bridge over North Hamby Creek
104	0004	897.77	nail in base of 4 inch willow tree located on north bank of Kyle Creek, approximately 800 feet downstream of County Line Road bridge
105	0004	864.49	chiseled square on top downstream end of 15 inch diameter pipe at dirt road bridge over Straight Creek, approximately 300 feet east of Raleigh Road

ELEVATION REFERENCE MARKS

REFERENCE MARK	FLOOD INSURANCE RATE MAP PANEL	ELEVATION (FEET NGVD)	DESCRIPTION OF LOCATION
106	0004	866.35	railroad spike in centerline of Raleigh Road bridge over Carlan Creek
107	0005	819.086	chiseled square on left end of downstream headwall at Highway 109 bridge over Ward Creek
108	0005	820.60	nail in root of 24 inch maple located along Ward Creek, approximately 350 feet upstream from the Highway 109 bridge



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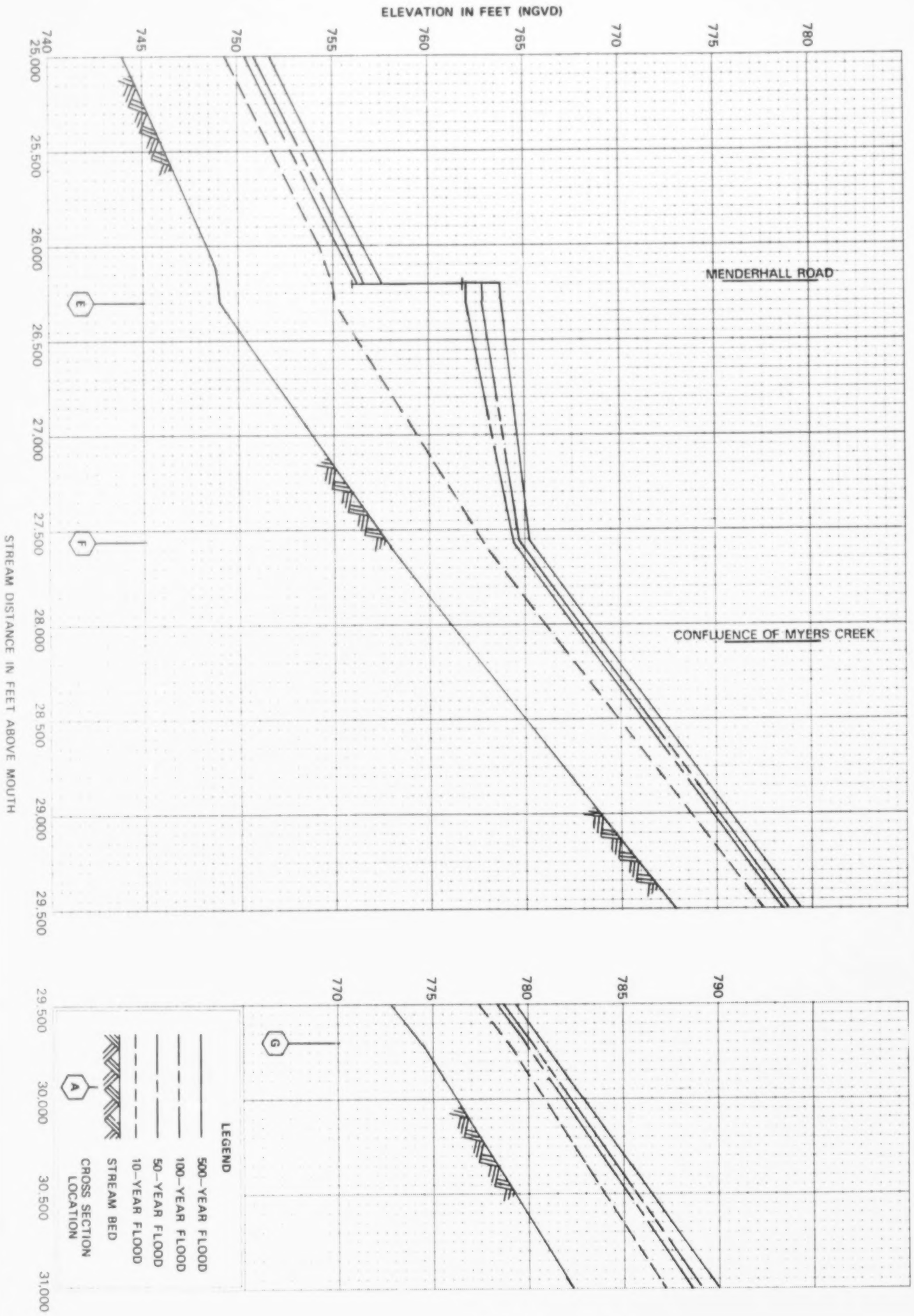


02P

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

FLOOD PROFILES

HUNTS FORK

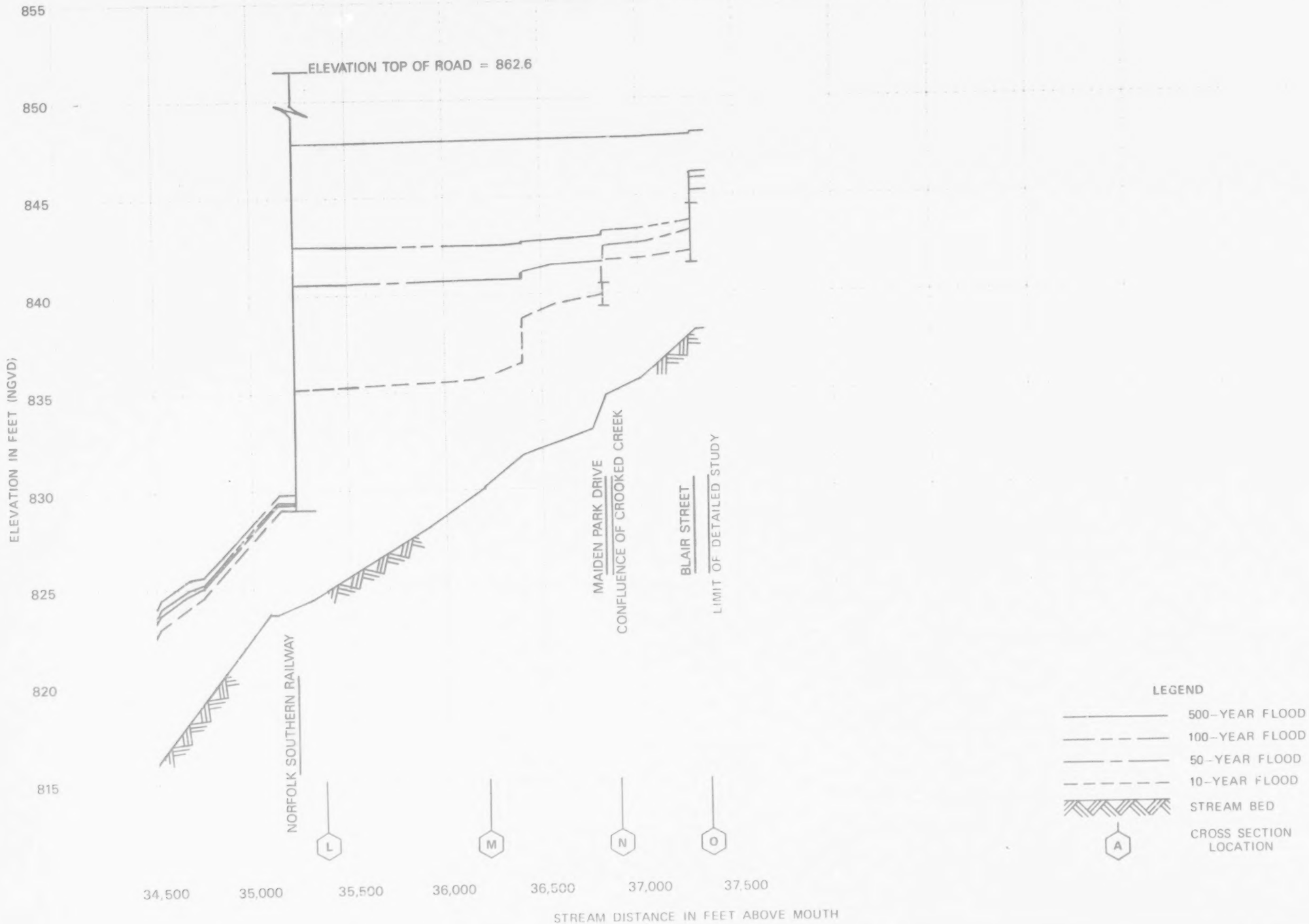
FLOOD PROFILES

HUNTS FORK

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

03P



FLOOD PROFILES

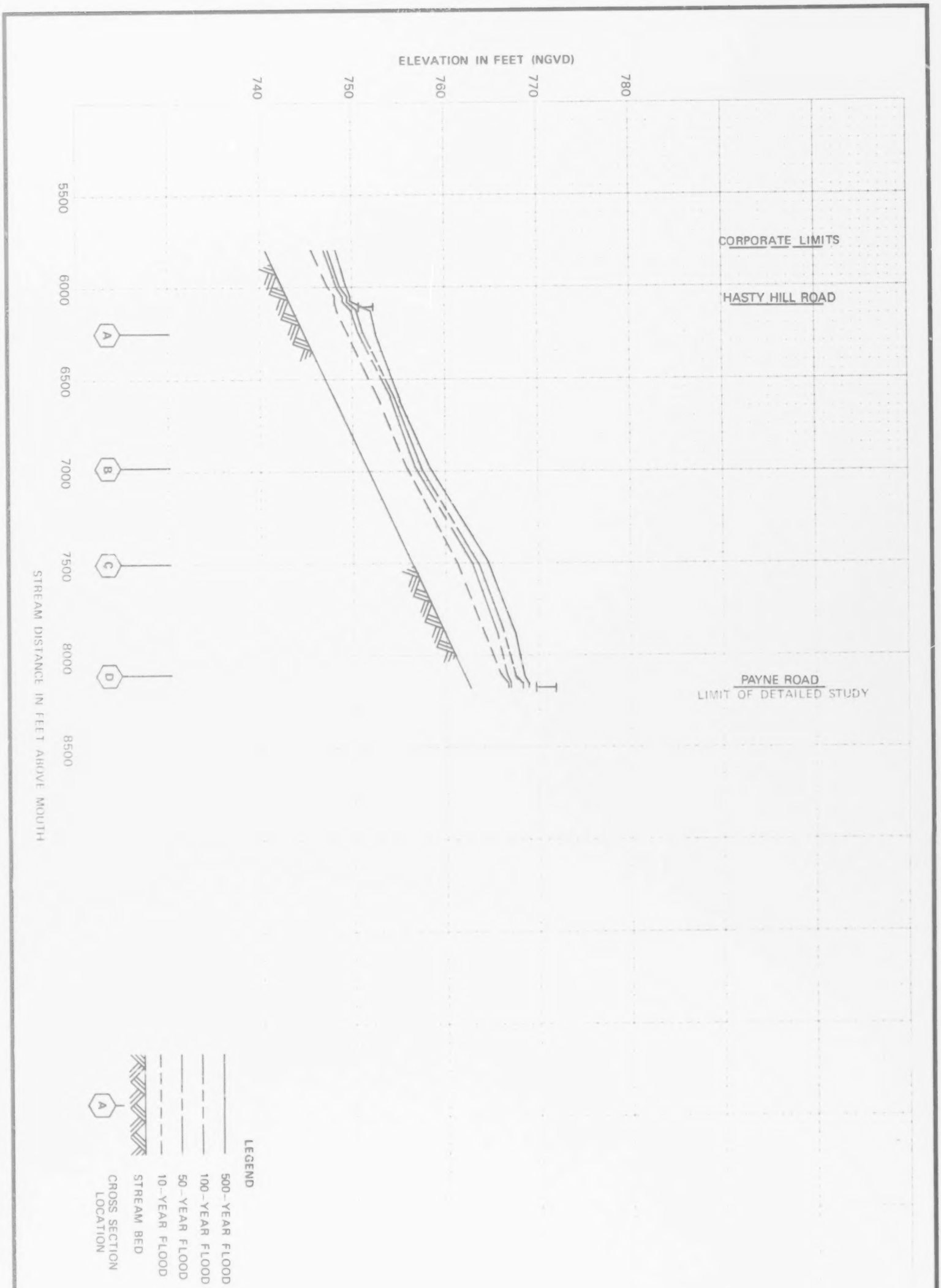
HUNTS FORK

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC

(DAVIDSON CO.)

04P



05P

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

FLOOD PROFILES

HASTY CREEK

FLOOD PROFILES

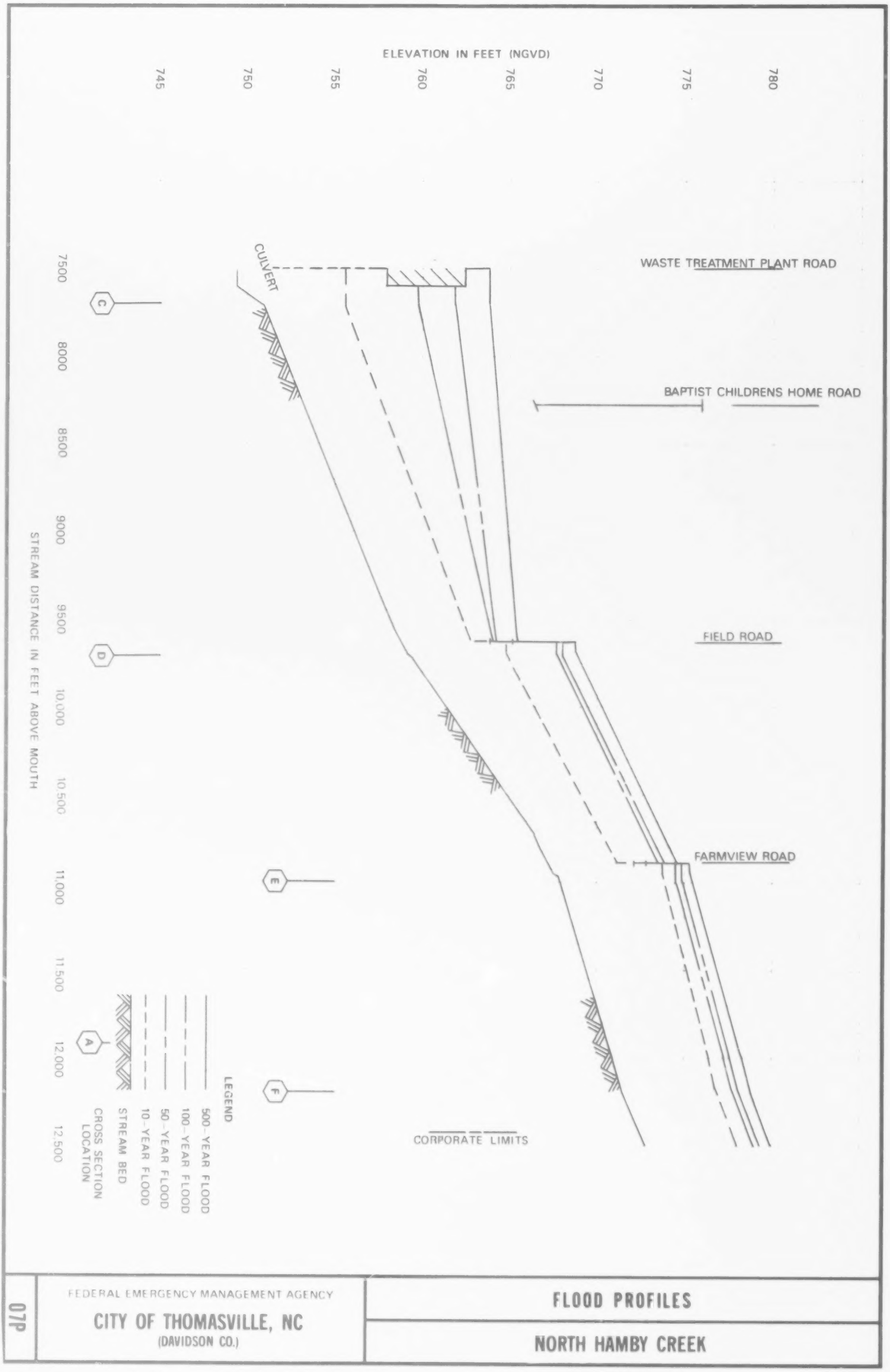
NORTH HAMBY CREEK

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC

(DAVIDSON CO.)

06P



07P

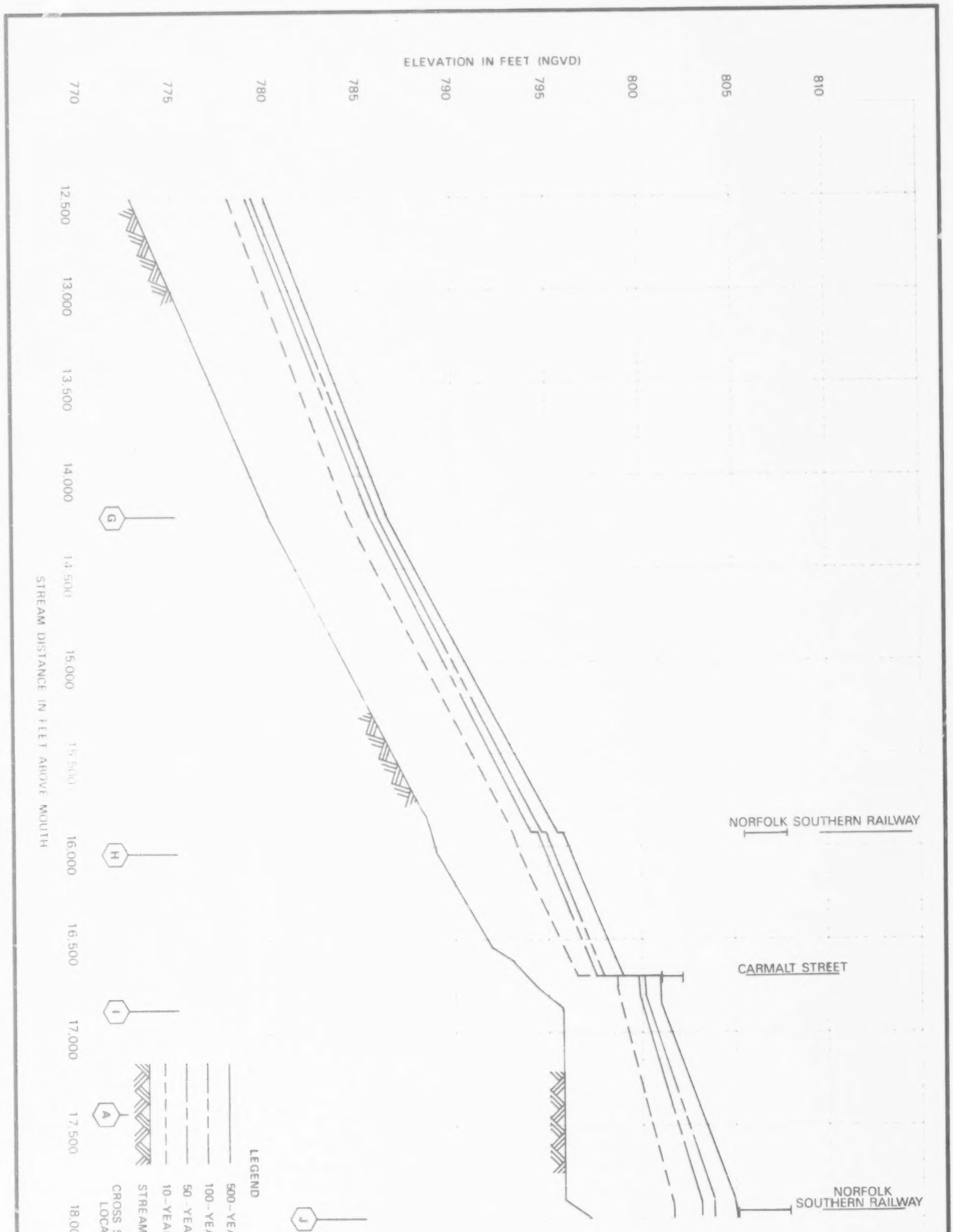
FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC

(DAVIDSON CO.)

FLOOD PROFILES

NORTH HAMBY CREEK



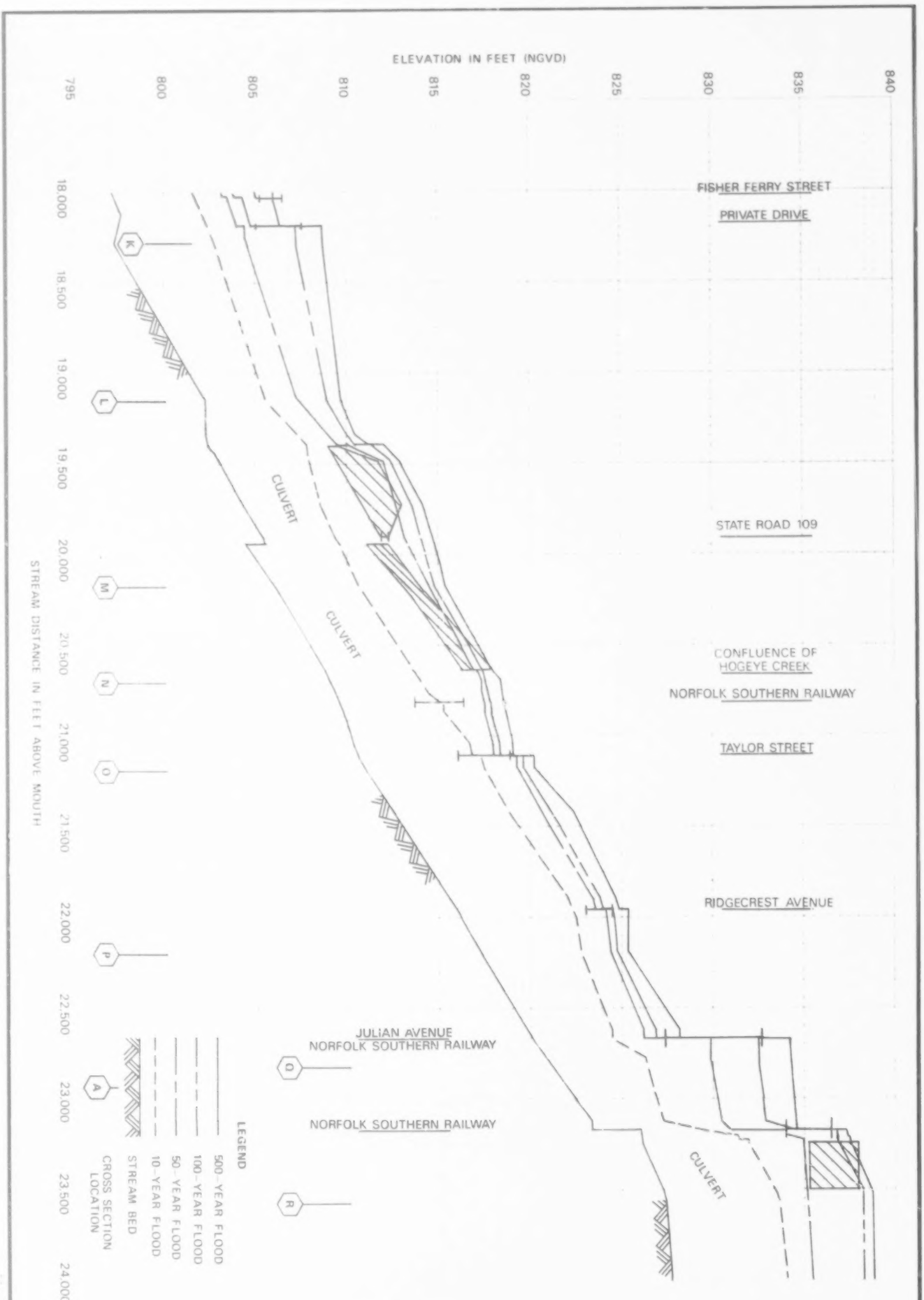
08P

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

FLOOD PROFILES

NORTH HAMBY CREEK



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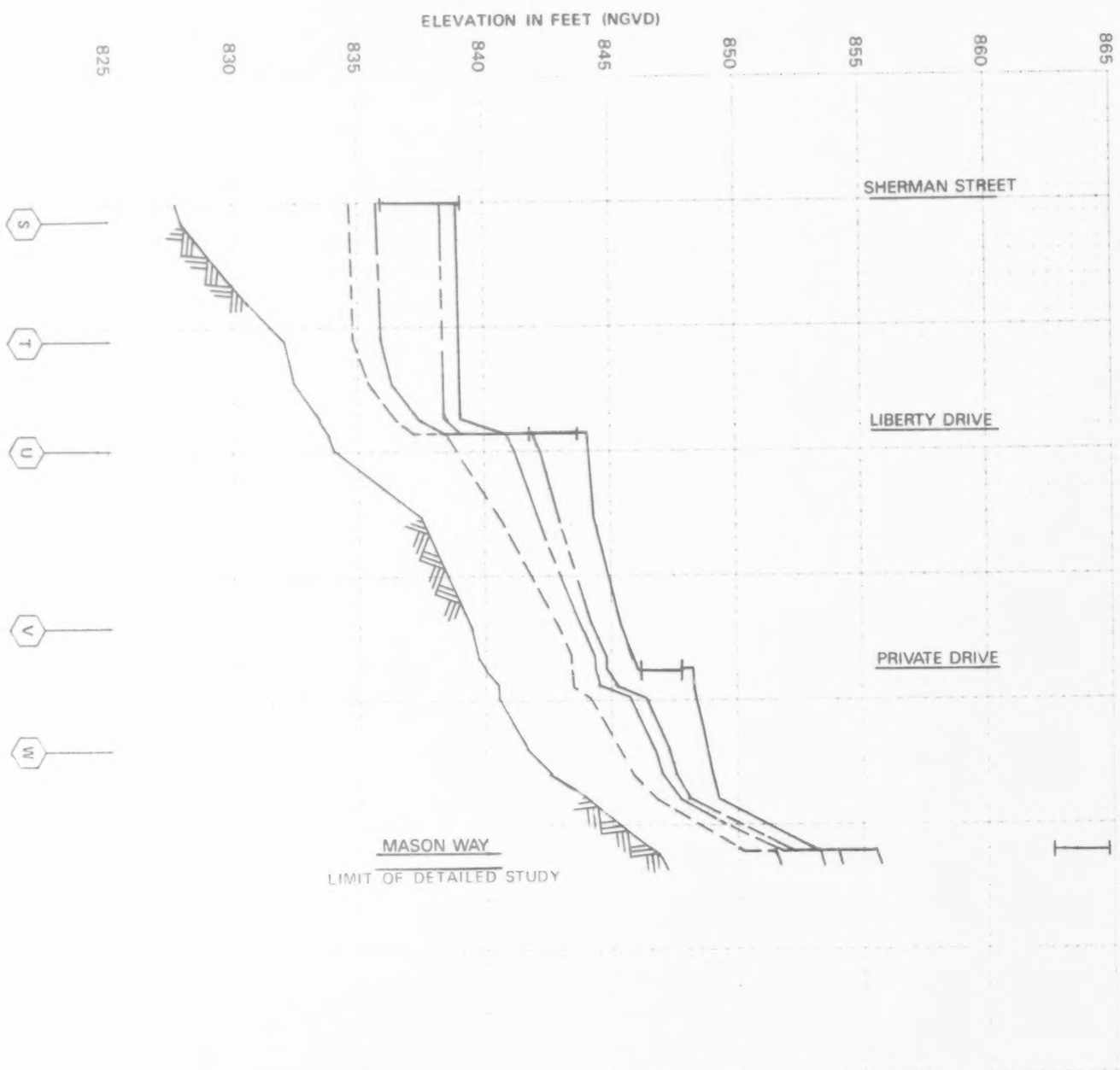


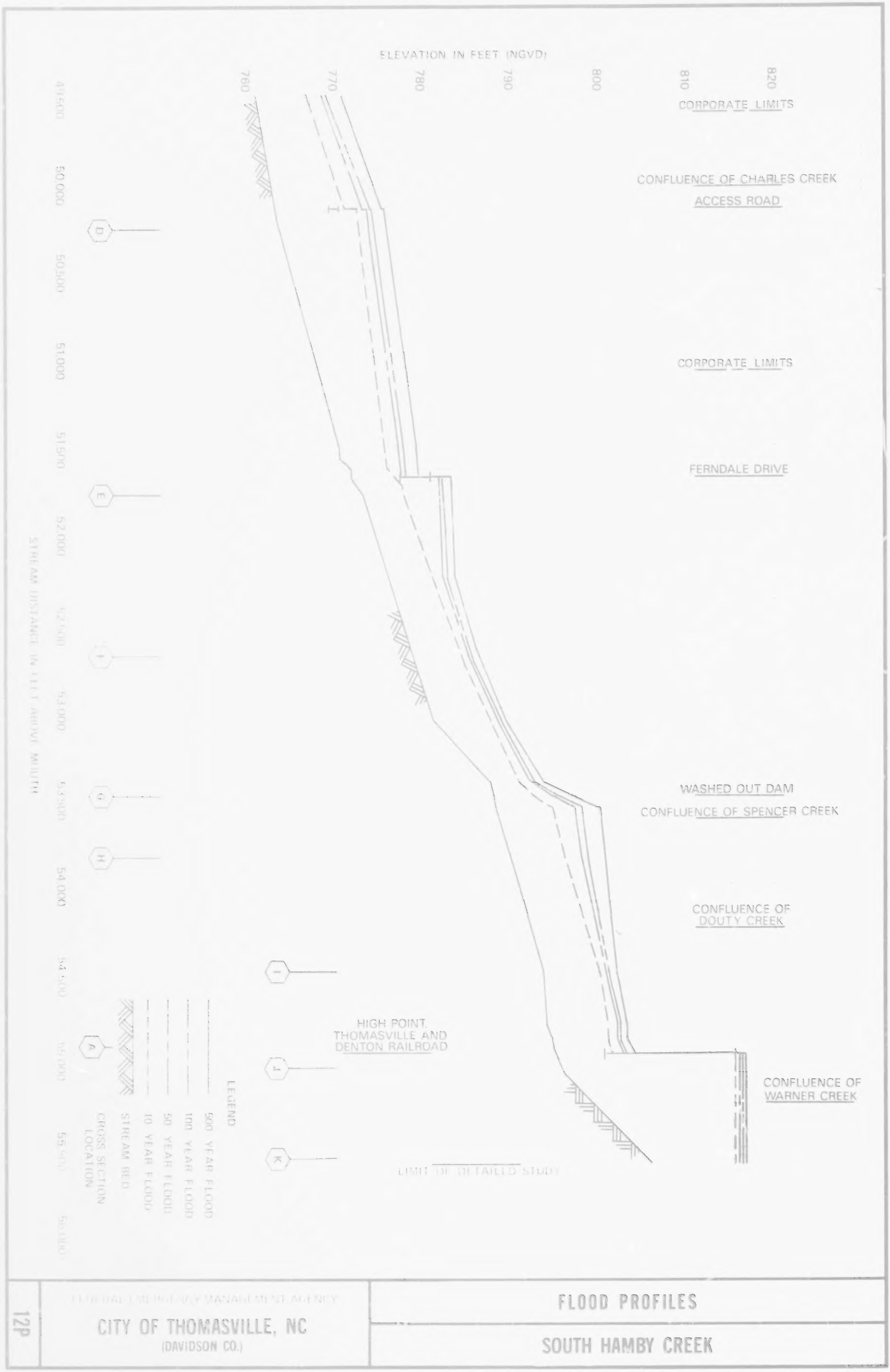
10P

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

FLOOD PROFILES

NORTH HAMBY CREEK



12P

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC
(DAVIDSON CO.)

FLOOD PROFILES

SOUTH HAMBY CREEK

FLOOD PROFILES

HANKS BRANCH

FEDERAL EMERGENCY MANAGEMENT AGENCY

CITY OF THOMASVILLE, NC

(DAVIDSON CO.)

13P